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| Zilka-Kotab, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120 | | | EXAMINER CHANG, JULIAN | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/654,771 | Applicant(s) MILLIKEN ET AL. | |
| | Examiner JULIAN CHANG | Art Unit 2452 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-66 is/are pending in the application.
- 4a) Of the above claim(s) 31-55 and 59-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30, 56-58, 65 and 66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>all</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office action is responsive to communication filed on 09/22/08.
Claims 1-66 are pending. Claims 1-30, 56-58, 65 and 66 have been elected, and have been examined below.

Requirement for Information

2. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application. Applicant has claimed priority to several continuation-in-part applications. Due to the discovery of intervening references, applicant is required to submit a mark-up for all such continuation-in-part applications showing subject matter added. See MPEP 704.11(a). These documents are necessary for determining whether the claimed priority should be granted.

Information Disclosure Statement

3. The information disclosure statement filed 09/04/03 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Election/Restrictions

4. Applicant's election without traverse of claims 1-30, 56-58, 65 and 66 in the reply filed on 09/22/08 is acknowledged.
5. Claims 31-55 and 59-64 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 09/22/08.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
7. Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. 35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language "shall be construed to cover the corresponding structure...described in the specification and equivalents thereof." "If one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112." *In re Donaldson Co.*, 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc). See MPEP 2181.

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9. The CAFC "has consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor". Aristocrat Techs. Australia PTY Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1333 (Fed. Cir. 2008). Simply disclosing a computer as the structure designated to perform a particular function does not limit the scope of the claim to "the corresponding structure, material, or acts" that perform the function, as required by 112, sixth paragraph, and amounts to pure functional claiming. Id. In the instant application, applicant has described the "means for" as hardware, software, or a combination of hardware and software (Spec. para. [0101]).

10. Claims 16 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. The term "significantly" in claim 16 is a relative term which renders the claim indefinite. The term "significantly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "significantly" renders the limitation "higher" indefinite.

12. The term "substantially" in claim 29 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "substantially" renders the limitation "higher" indefinite.

Claim Rejections - 35 USC § 101

13. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

14. Claim 30 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

15. Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program’s functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program’s functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035. See MPEP 2106.01.

16. Applicant discloses that the invention may be implemented using hardware, software, or a combination of hardware and software (para. [0101]). Since the system of claim 30 comprises “means for” that may all be software, the invention is directed towards software per se, and not patentable.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

18. Claims 1, 2, 5, 11, 12, 17, 22, 23, 28, 30, 56-58 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,460,050 ("Pace").

19. Regarding claim 1, Pace teaches a method comprising:

receiving a plurality of e-mail messages (Fig. 2, Col. 3, lines 32-58);
generating hash values, as generated hash values, based on one or more portions of the plurality of e-mail messages ('multiple hashes', Col. 4, lines 1-14);
determining whether the generated hash values match hash values associated with prior e-mail messages (Col. 6, lines 1-18); and
determining that one of the plurality of e-mail messages is a potentially unwanted e-mail message when one or more of the generated hash values associated with the one of the plurality of e-mail messages match one or more of the hash values associated with the prior e-mail messages (Col. 6, lines 1-18).

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20. Regarding claim 2, Pace further teaches performing a plurality of hashes on a plurality of variable-sized blocks of a main text of the plurality of e-mail messages (Pace: 'all of the body or portions of the body', Col. 4, lines 1-14). Since the main texts of messages are not all the same length, the block (i.e., body) is variably-sized.

21. Regarding claim 5, Pace further teaches performing a plurality of hashes on a main text of the plurality of e-mail messages using a same hash function (Pace: 'MD5', Col. 4, lines 1-14).

22. Regarding claim 11, Pace further teaches comparing the generated hash values to hash values corresponding to known unwanted e-mails (Pace: Col. 6, lines 1-18).

23. Regarding claim 12, Pace further teaches that known unwanted e-mails include at least one of e-mails containing a virus, e-mails containing a worm, and unsolicited commercial e-mails (Pace: 'spam', Col. 6, lines 1-18).

24. Regarding claim 17, Pace further teaches taking remedial action when the one of the plurality of e-mail messages is a potentially unwanted e-mail message, the taking remedial action including at least one of: discarding the one of the plurality of e-mail messages, bouncing the one of the plurality of e-mail messages, marking the one of the plurality of e-mail messages with a warning,

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subjecting the one of the plurality of e-mail messages to a virus or worm detection process, creating a notification message, and generating a suspicion score for the one of the plurality of e-mail messages and using the suspicion score to identify further processing for the one of the plurality of e-mail messages (Pace: 'subject line may be appended to indicate that the e-mail is "spam", Col. 5, lines 41-54).

25. Regarding claim 22, Pace further teaches comparing the generated hash values to known legitimate mailing lists; and passing the plurality of e-mail messages without further examination when the generated hash values match one or more of the known legitimate mailing lists (Pace: 'exceptions', Col. 6, lines 18-34).

26. Regarding claim 23, Pace further teaches determining whether the plurality of e-mail messages originated from the known legitimate mailing lists (Pace: Col. 6, lines 18-34).

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27. Regarding claim 28, Pace further teaches hashing a main text of the plurality of e-mail messages to generate a main text hash (Pace: 'all of the body or portions of the body', Col. 4, lines 1-14), and hashing at least one header field of the plurality of e-mail messages to generate at least one header hash (Pace: 'header', Col. 4, lines 1-14).

28. Regarding claim 30, Pace teaches a system comprising:

- means for observing a plurality of e-mails (Fig. 2, Element 20);
- means for hashing one or more portions of the plurality of e-mails to generate hash values, as generated hash values (Fig. 3, Element 110; Col. 4, lines 1-14);
- means for determining whether the generated hash values match hash values associated with prior e-mails (Fig. 4, Element 222; Col. 6, lines 1-18); and
- means for determining that the plurality of e-mails are potentially unwanted e-mails when one or more of the generated hash values match one or more of the hash values associated with the prior e-mails (Fig. 4, Element 222, Col. 6, lines 1-18).

29. Regarding claim 56, Pace teaches a method comprising:

- receiving a plurality of e-mail messages (Fig. 2; Col. 3, lines 33-49); and
- detecting unwanted e-mail messages from the plurality of e-mail messages based on hashes of previously received e-mail messages ('hash of at least a portion of the e-mail', 'spam or not', Col. 3, lines 33-49),

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where multiple hashes are performed on each of the plurality of e-mail messages ('multiple hashes', Col. 4, lines 1-14).

30. Regarding claim 57, Pace teaches a method comprising:

receiving an e-mail message (Fig. 2, Col. 3, lines 32-58);

generating a plurality of hash values ('multiple hashes', Col. 4, lines 1-14), as generated hash values, over blocks of the received e-mail message ('all or some portion of the data under consideration', Col. 4, lines 1-14) the blocks including at least two of a main text portion, an attachment portion, and a header portion of the received e-mail message ('subject line', 'body', Col. 4, lines 1-14);

determining whether the generated hash values match hash values associated with prior e-mail messages (Col. 6, lines 1-18); and

determining that the received e-mail message is a potentially unwanted e-mail message when one or more of the generated hash values associated with the received e-mail message match one or more of the hash values associated with the prior e-mail messages (Col. 6, lines 1-18).

31. Regarding claim 58, Pace further teaches that the blocks are variable-sized blocks of the received e-mail message (Pace: 'subject line', Col. 4, lines 1-14). Since subject lines are not all the same length, the block (i.e., subject line) is variably-sized.

Claim Rejections - 35 USC § 103

32. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

33. Claims 65 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pace, and further in view of U.S. Pub. No. 2002/0120705 ("Schiavone"), and U.S. Pub. No. 2002/0199095 ("Bandini").

34. Schiavone and Bandini are intervening references that qualify as prior art because the Office was unable to find in applicant's priority documents support for the claim limitations for which Schiavone and Bandini are relied upon.

35. Regarding claim 65, Pace teaches a method comprising:
receiving an e-mail message (Fig. 2, Col. 3, lines 32-58);
generating a plurality of hash values, as generated hash values, over portions of the e-mail message ('multiple hashes', Col. 4, lines 1-14); and
determining whether the generated hash values match hash values associated with prior e-mail messages (Col. 6, lines 1-18).

Pace fails to teach incrementally performing the step of determining; generating a suspicion score for the e-mail message based on the determining; and rejecting the e-mail message when the suspicion score of the e-mail message is above a threshold.

Bandini teaches incrementally determining whether generated hash values match (Fig. 3); generating a suspicion score (Fig. 3, Step 68; para. [0023]); and rejecting the e-mail message when the suspicion score is above a threshold (Fig. 3, Step 70; para. [0023]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ a running total suspicion score as taught by Bandini in order to classify messages as either clean, borderline, or SPAM using a weighted system.

Pace-Bandini fails to teach generating hash values as a message is being received. Schiavone teaches performing hashing in real-time as the message is being received (para. [0026]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to perform hashing in real-time as taught by Schiavone in order to bouncing messages in real-time.

36. Regarding claim 66, Pace-Bandini-Schiavone teaches the invention substantially as claimed and described in claim 65 above, including the rejecting occurs before the e-mail message is completely received (Schiavone: para. [0026]).

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37. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pace.

38. Regarding claim 3, Pace teaches the invention substantially as claimed and described in claim 1 above, including performing a plurality of hashes on a plurality of fixed-sized blocks of a subject line (Pace: ‘some number of characters of the subject line’, Col. 4, lines 1-14), but fails to teach doing so for fixed-sized blocks of the main text.

In KSR Int’l. Co. v. Teleflex Inc., the Court recognized that “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill”. 127 S.Ct 1727, 1740 (2007). In the instant case, one of ordinary skill would recognize that SPAM messages are modified slightly in order to avoid exact matching by SPAM filters. It would have been obvious to one of ordinary skill in the art at the time of applicant’s invention to apply the technique taught in Pace to fixed-sized blocks of main text in order to make it harder for SPAM senders to circumvent SPAM filters

39. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pace as applied to claim 1 above, and further in view of U.S. Pat. No. 6,169,969 (“Cohen”).

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40. Regarding claim 4, Pace teaches the invention substantially as claimed and described in claim 1 above, but fails to teach performing a plurality of hashes on a main text of the plurality of e-mail messages using a plurality of different hash functions.

Cohen discloses employing multiple hash functions (Col. 2, lines 1-21) (describing Bloom). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ multiple hash functions as disclosed in Cohen in order to improve false alarm rates.

41. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pace as applied to claim 1 above, and further in view of U.S. Pub. No. 2003/0167402 ("Stolfo"), and U.S. 2002/0152399 ("Smith").

42. Stolfo and Smith are intervening references that qualify as prior art because the Office was unable to find in applicant's priority documents support for the claim limitations for which Stolfo and Smith are relied upon.

43. Regarding claim 6, Pace teaches the invention substantially as claimed and described in claim 1 above, but fails to teach performing hashes on attachments.

Stolfo teaches performing hashes on attachments ('MD5', para. [0045]). It would have been obvious to one of ordinary skill in the art at the time of

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applicant's invention to perform hashes on attachments as taught by Stolfo in order to detect malicious attachments.

Pace-Stolfo fails to teach attempting to decompress an attachment prior to hashing. Smith teaches decompressing an attachment prior to determining whether the attachment contains an exploit (Fig. 6; para. [0071]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to decompress an attachment prior to scanning as taught by Smith in order to find hidden exploits in an attachment.

44. Claims 7, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pace as applied to claim 1 above, and further in view of Stolfo.

45. Regarding claim 7, Pace teaches the invention substantially as claimed and described in claim 1 above, including performing a plurality of hashes on a plurality of variable-sized blocks of information (Pace: Col. 4, lines 1-14), but fails to teach performing hashes on attachments.

Stolfo teaches performing hashes on attachments (para. [0045]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to perform hashes on attachments as taught by Stolfo in order to detect malicious attachments.

46. Regarding claim 8, Pace teaches the invention substantially as claimed and described in claim 1 above, including performing a plurality of hashes on a

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plurality of fixed-sized blocks of information (Pace: Col. 4, lines 1-14), but fails to teach performing hashes on attachments.

Stolfo teaches performing hashes on attachments (para. [0045]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to perform hashes on attachments as taught by Stolfo in order to detect malicious attachments.

47. Regarding claim 10, Pace teaches the invention substantially as claimed and described in claim 1 above, but fails to teach performing hashes on attachments.

Stolfo teaches performing hashes on attachments using a single hash function ('MD5', para. [0045]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to perform hashes on attachments as taught by Stolfo in order to detect malicious attachments.

48. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pace as applied to claim 1 above, and further in view of Stolfo and Cohen.

49. Regarding claim 8, Pace teaches the invention substantially as claimed and described in claim 1 above, but fails to teach performing hashes on attachments.

Stolfo teaches performing hashes on attachments (para. [0045]). It would have been obvious to one of ordinary skill in the art at the time of applicant's

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invention to perform hashes on attachments as taught by Stolfo in order to detect malicious attachments.

Pace-Stolfo fails to teach performing a plurality of hashes using a plurality of different hash functions. Cohen discloses employing multiple hash functions (Col. 2, lines 1-21) (describing Bloom). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ multiple hash functions as disclosed in Cohen in order to improve false alarm rates.

50. Claims 13-15, 18 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pace as applied to claim 1 above, and further in view of Bandini.

51. Regarding claim 13, Pace teaches the invention substantially as claimed and described in claim 1 above, including hashing at least one of a main text and an attachment to generate one or more first hash values (Pace: 'all of the body or portions of the body', Col. 4, lines 1-14), and hashing a concatenation of fields to generate a second hash value (Pace: Col. 4, lines 1-14).

Pace fails to teach first and second header fields. Bandini teaches first and second header fields (para. [0026]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to hash multiple header fields as taught by Bandini in order to more accurately determine the likelihood that the message is SPAM.

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52. Regarding claim 14, Pace-Bandini teaches the invention substantially as claimed and described in claim 13 above, including a From header field and a To header field (Bandini: para. [0026]).

53. Regarding claim 15, Pace-Bandini teaches the invention substantially as claimed and described in claim 13 above, including generating suspicion counts (Pace: 'frequency', Col. 6, lines 1-18).

54. Regarding claim 18, Pace teaches the invention substantially as claimed and described in claim 1 above, including taking remedial action when the one of the plurality of e-mail messages is a potentially unwanted e-mail message, the taking remedial action including: determining whether a newly received e-mail message exceeds a mail quota, identifying an earlier-received e-mail message with a highest suspicion score, determining whether the suspicion score of the newly received e-mail message is lower than the suspicion score of the earlier-received e-mail message when the newly received e-mail message exceeds the mail quota, deleting the earlier-received e-mail message when the suspicion score of the newly received e-mail message is lower than the suspicion score of the earlier-received e-mail message, and storing the newly received e-mail message (Pace: 'subject line may be appended to indicate that the e-mail is "spam", Col. 5, lines 41-54).

Pace fails to teach generating a suspicion score for the plurality of e-mail messages based on a result of the determination of whether the generated hash

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values match hash values associated with prior e-mail messages. Bandini teaches generating a suspicion score for the plurality of e-mail messages based on a result of the determination of whether the generated hash values match hash values associated with prior e-mail messages (Fig. 3, Step 68; para. [0023]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to generate a suspicion score as taught by Bandini in order to classify messages as either clean, borderline, or SPAM.

55. Regarding claim 24, Pace teaches the invention substantially as claimed and described in claim 1 above, including hashing a main text to generate a first hash value (Pace: 'all of the body or portions of the body', Col. 4, lines 1-14), and hashing header fields to generate one or more second hash values (Pace: Col. 4, lines 1-14).

Pace fails to teach hashing sender-related header fields. Bandini teaches hashing sender-related header fields ('sender address', para. [0026]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to hash sender-related header fields in order to more accurately determine the likelihood that the message is SPAM.

56. Regarding claim 25, Pace-Bandini teaches the invention substantially as claimed and described in claim 24 above, including that a sender-related header fields include at least one of a From header field, a Sender header field, and a Reply-To header field (Bandini: para. [0026]).

57. Regarding claim 26, Pace-Bandini teaches the invention substantially as claimed and described in claim 24 above, including generating suspicion counts (Pace: 'frequency', Col. 6, lines 1-18).

58. Claims 16 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pace-Bandini as applied to claims 15 and 26 above, and further in view of U.S. Pat. No. 6,985,923 ("Bates").

59. Regarding claims 16 and 27, Pace-Bandini teaches the invention substantially as claimed and described in claims 15 and 26 above, but fails to teach determining that an email message is potentially unwanted when the main text matches a substantially higher number of emails than the header hash. In other words, an email is unwanted when the same message is received from different addresses.

Bates teaches determining that a message is unwanted when the same message is received from different senders (Col. 1, lines 22-30). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to determine messages to be unwanted when the same message is received from different senders as taught by Bates in order to avoid duplicate messages.

60. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pace as applied to claim 1 above, and further in view of Schiavone.

61. Regarding claim 19, Pace teaches the invention substantially as claimed and described in claim 1 above, but fails to teach generating and comparing hash values as a message is being received.

Schiavone teaches performing hashing in real-time as the message is being received (para. [0026]). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to perform hashing in real-time as taught by Schiavone in order to bouncing messages in real-time.

62. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pace-Schiavone as applied to claim 19 above, and further in view of Bandini.

63. Regarding claim 20, Pace-Schiavone teaches the invention substantially as claimed and described in claim 19, but fails to teach generating a suspicion score for the plurality of e-mail messages based on a result of the determination of whether the generated hash values match hash values associated with prior e-mail messages; and taking remedial action when the suspicion score of an e-mail message of the plurality of e-mail messages is above a threshold, the taking remedial action including rejecting the e-mail message.

Bandini teaches generating a suspicion score for the plurality of e-mail messages based on a result of the determination of whether the generated hash values match hash values associated with prior e-mail messages (Fig. 3; para.

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[0023]); and taking remedial action when the suspicion score of an e-mail message of the plurality of e-mail messages is above a threshold (Fig. 3; para. [0023]), the taking remedial action including rejecting the e-mail message (Fig. 2, Step 60).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to generate a suspicion score as taught by Bandini in order to classify messages as either clean, borderline, or SPAM using a weighted system.

64. Regarding claim 21, Pace-Schiavone-Bandini teaches the invention substantially as claimed and described in claim 20, including that rejecting occurs before the e-mail message is completely received (Schiavone: para. [0026]).

65. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pace as applied to claim 28 above, and further in view of Bates.

66. Regarding claim 29, Pace teaches the invention substantially as claimed and described in claim 28 above, but fails to teach determining that an email message is potentially unwanted when the main text matches a substantially higher number of emails than the header hash. In other words, an email is unwanted when the same message is received from different addresses.

Bates teaches determining that a message is unwanted when the same message is received from different senders (Col. 1, lines 22-30). It would have

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been obvious to one of ordinary skill in the art at the time of applicant's invention to determine messages to be unwanted when the same message is received from different senders as taught by Bates in order to avoid duplicate messages.

Conclusion

67. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. U.S. Pub. No. 2002/0181703
- b. U.S. Pat. No. 5,946,679
- c. U.S. Pub. No. 2003/0236845
- d. U.S. Pat. No. 6,615,242
- e. U.S. Pat. No. 6,321,267
- f. U.S. Pat. No. 6,691,156

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JULIAN CHANG whose telephone number is (571)272-8631. The examiner can normally be reached on Monday thru Friday 9AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/J. C./
Examiner, Art Unit 2452

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Supervisory Patent Examiner, Art Unit 2451